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ABSTRACT

This report describes a 12-week pilot phase of an affective education program in the Stuttgart School District, Arkansas. Participating in the program were 218 children, grades 2-4, and a team of nineteen teachers who were given 12 weeks of in-service training designed to facilitate their use of the DUSO, Focus on Self-Development Human Development Program, and Kohlberg's First Things -- A Study of Values. The Barclay Classroom Climate Inventory (BCCI) was the primary data collection technique used to assess the program. Classroom and grade level differences are reported, as well as gains on the BCCI. The children appeared to benefit from the affective education team's systematic implementation of a program of integrated learning activities. Results are presented in tabular form. The text summary of results points out several significant differences observed for boys and girls in areas including career awareness, self-competency, classroom management and teacher rating of students. (BF)

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AFFECTIVE EDUCATION IN THE PRIMARY GRADE LEVELS: A PILOT PROGRAM

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ABSTRACT

Nineteen K-4 teachers were given 12 weeks of in-service training designed to facilitate their use of DUSO, Focus on Self-Development Human Development Program (HDP), and Kohlberg's First Things - A Study of Values. Two-hundred eighteen children (110 boys and 108 girls) in the second, third and fourth grades appeared to benefit dramatically from an effective education team's systematic implementation of the integrated learning activities, "The Circle". Pilot program assessment used the Barclay Classroom Climate Inventory (BCCI) as the February and May 1975 primary data collection technique. Classroom and grade level differences are reported as well as 12-week gains on the BCCI.

AFFECTIVE EDUCATION IN THE PRIMARY GRADE LEVELS: A PILOT PROGRAM

The affective education program undertaken by Stuttgart School District No. 22, Arkansas, is an exemplary effort for many American school systems. For a large number of years education has valued academic accomplishments more so than it appreciated career education. The high value for academic education resulted in a second class citizenship for other undertakings. The great contribution of former Commissioner of Education, Sidney P. Marland, Jr., was to stimulate a change in the thrust of American education to include career education development as a suitable partner for academic education. It remained for only the most recent efforts of leaders in psychology and in education (e.g., Barclay, Carkhuff, Dinkmeyer, Kohlberg, and Rogers) to put affective education into the American educational partnership.

Throughout the latter effort critics and supporters have discussed the issues of assessment and evaluation of affective education. The result in many discussions has been 'sound and fury'. From within this dialogue James R. Barclay has developed an assessment system which appears to meet many of the issues involved in the assessment and evaluation of affective education programs (Barclay, 1974a). The Barclay Classroom Climate Inventory (BCCI) is a multitrait, multisource assessment technique which taps the support systems available to elementary school age children—teacher judgments, peer nominations, self-competency and self-report. The data obtained from the BCCI is, indeed, impressive and useful for educators on all levels and for parents.

The Stuttgart affective education program's conceptualization and implementation appears to have considered most of the activities described by Stilwell (1976) in his program implementation model. Seven independent and interdependent functions are listed in this model. In the Stuttgart program, for example, the program manager and staff obtained community, school board, and State level support, performed a number of needs assessments, considered a number of affective education curricular programs, and merged them into the present "Circle" learning activities. Further, this paper is an example of the evaluation and feedback activity suggested by 7.0, Evaluate Affective Education Program. Thus, this paper provides information to a wide variety of educators interested in effective education, in general, and to the Stuttgart program personnel in particular.

To carry the exemplary nature of this project one step further, the in-service training in a grade level team approach conducted by Edmund Barnette, Arkansas State University, appears to be a crucial contributor to the success of the program. The training and team development exemplifies Stilwell and Santoro's (1976) 1.0, Training in Developing a Learning Development Consultant team. This team approach to the delivery of guidance services appears to be a viable alternative in this time of financial limitations.

TRAINING PROGRAM

All the teachers for K-4 in Buerkle School were asked to participate in an effective education training program funded by E.S.E.A. Title III. Roger Aubrey, Brookline Public Schools (MA), set the stage for the affective program within the classroom. He coordinated the initial workshop on DUSO, Human Development Program, Focus on Self-Development and Kohlberg's First Things - A Study of Values. These several curricular activities became "The Circle" with the continued in-service training by Edmund Barnett. The program manager, Mary Alice

Acklin defined a systematic affective education program as one meeting three times a week on a regular basis. Accordingly with these several contributors the affective education training program (5 days of training throughout Spring of 1975) was completed with the results reported in this paper.

DATA ANALYSIS

Two-hundred eighteen (110 boys and 108 girls) complete BCCI data sets were analyzed for this report. We considered the BCCI assessments for February 1975 and for May 1975. Further in an effort to simplify the presentation we used 15 selected BCCI scale scores. These selected scores have been identified as especially appropriate for this report (Barclay, Covert, Scott & Stilwell, 1975).

The data analysis for this report was completed in three stages. First, we looked at student scores in each classroom. This information is presented in Table 1 for boys and in Table 2 for girls. Then we grouped the data by grade levels so that we could recognize trends and patterns as they developed. This information is presented in Tables 3 and 4 for boys and girls, respectively. Finally, we analyzed the data by comparing the fall and spring scores by a covariance technique (Table 5). These five analyses will be briefly described.

In Table 1 and 2 we display the number of boys and girls on whom we had complete February and May data, the February and May average scores for each of the 15 selected BCCI scores, means, standard deviations, F-statistic, and their respective probability levels. For many of these analyses the difference was not statistically significant (i.e., not less than .05). However, for informational purposes we reported all the results.

Differences Among the Ten Buerkle Classrooms (Boys)

An analysis of variance was performed on the selected 15 BCCI variables for boys (Table 1). For most of the BCCI scores we did not obtain significant differences among the ten classrooms. Indeed as far as the group support system for boys are concerned the ten classrooms do not appear to be different! Further in the area of career education (awareness) we found that some differences existed for boys' intellectual career interests in the February assessment. However, by May this difference was no longer apparent. Such comments on group support and career awareness are to be contrasted with self-competency, teacher judgment, and attitude toward school data.

Important and often dramatic differences among the ten classrooms were noted for boys in three meaningful areas. In the area of self-competency we found differences among the classrooms in both February and May. While these differences were not significant statistically, they are still meaningful (e.g., how are boys in 12-22 different from 12-23 boys? What happened in 12-27 or in 12-28 overtime?). In the area of teacher support (positive and negative) the greatest differences were observed. For example, teacher 12-23 appears to have a style of rating boys that is different from teacher 12-52's style. How this difference influences affective or academic education remains to be seen. Probably "high" and "low" teachers could discuss learning management styles to determine possible contributors to their BCCI differences. Lastly, in the area of attitude toward school, the ten classrooms were very different statistically. We can see a wide range between 12-27 and 12-21 in February or between 12-22 and 12-21 in May. The interesting question for the Program

Manager is what differences in learning management styles exist between these extreme teachers? Can the "high" teacher's management style become a model for other teachers?

Differences Among the Ten Buerkle Classrooms (Girls)

The girls in the ten classrooms at Buerkle were compared by an analysis of variance (Table 2). On most of the 15 selected BCCI scales the pattern of differences for girls closely resembled the pattern of differences for boys. That is, in the BCCI area of group nominations we found that the classrooms did not differ for the girls. Also in the career awareness area only on the intellectural career area did the girls differ significantly in both the February and May BCCI assessments. This pattern of consistency is especially interesting because it suggests the peer interests and social systems for boys and girls are very similar. At a slightly older age (e.g., fifth grade level) we would anticipate some differences developing.

Again we observed differences among the classrooms in three crucial areas -- self-competency, teacher support, and attitude toward school. For the girls, the differences in self-competency among the ten classrooms was very apparent. We see in Table 2 the suggestion of a pattern such that the younger children (e.g., 12-21) have more positive self-competency than older children (e.g., 12-51). This pattern has been reported elsewhere by Barclay (1974b). In the area of teacher support (positive and negative) we found profound differences among the ten classrooms for girls. We see differences in teacher support levels (e.g., 12-23 vs. 12-27) and consistency in support (e.g., 12-51 and 12-25) over time. The how and why some people respond to in-service training remains as an important question. From these data on teacher support we may speculate that teachers become more discriminating in their judgments. Lastly, in attitude toward school, the girls in the spring

showed some differences among the classrooms. These differences were not significant, but were meaningful. Most of the classrooms improved their attitude toward school, but at differential rates (e.g., what happened in 12-22 and 12-26 that did not happen in 12-50 and 12-21?). How the classrooms did differ should become the thrust for continued in-service training of new and already participating teachers.

In order to obtain some focus on these differences among classrooms we combined the data into three grade levels. Essentially then, we can say that these analyses are looking at how the three grade level teams are similar in terms of BCCI scale scores. Again, we used the 15 most meaningful scales for these analyses.

Differences Among the Three Grade Levels (Boys)

When the classroom units were merged into three grade levels (i.e., 2 = 12-21 through 12-24, 3 = 12-25 through 12-27, and 4 = 12-50 through 12-52) new patterns of differences begin to emerge. Among the 15 selected BCCI scores only five scales produced differences among the three grade levels for boys. From the boys' own responses on the BCCI three patterns of differences were identified. In the self-competency area differences were not obtained for the February assessment, but by May differences appeared such that third grade level boys scores higher than either second or fourth grade level boys. This uneven pattern is not uncommon (Barclay, 1974b). In these other populations assessed with the BCCI we have observed a decline in overall self-competency between second and fourth grade levels. An important pattern appears in the boys' interests in socially oriented career activities. In the early part of 1975 little difference was found among the three grade levels. However, by the spring the second and third

grade level boys appeared to have developed a greater interest in socially oriented career activities than did their fourth grade level school mates. At least two interpretations should be offered on this pattern: (1) possibly the "Circle" techniques serve to stimulate boys' interests in socially oriented career activities or (2) possibly the team members have modeled socially oriented interests. Lastly in the area of self-report, a desirable pattern was observed among the boys' attitude toward school. Initially in the February assessment the fairly typical pattern of second grade level students liking school more than fourth was observed. However, by the spring these differences appeared to disappear. Thus, among the boys three potentially interesting patterns developed for facilitation by the grade level teams.

Peer nominations of reticent boys appeared to be modestly significant, but still important for affective education team members. In February the second grade level boys were more frequently judged by their peers to be reticent than their fourth grade level friends. By the spring BCCI assessment, fewer boys appeared to be so nominated. It would appear from Tables 3 and 4 that a grade level by sex of student interaction has occurred such that fourth grade level students remained about the same in their frequency of peer reticent nominations. However among the second and third grade level students, second grade boys and third grade girls were less frequently nominated in the spring. In this interaction we are probably observing a developmental pattern which should be anticipated (Barclay, 1974b).

For the boys in both the February and May assessments their positive teacher ratings were very different by grade level. In other data sets Barclay (1974b) reports that teacher positive ratings decline across grade levels so that second grade level boys and girls have a more positive rating

than sixth graders, for example. Among the three grade level teams the teachers provided BCCI data which runs counter to that previous evidence for boys and this special pattern shows the value of the teacher in-service training program, as far as boys are concerned. An analogous interpretation can be made for the negative teacher ratings. That is, typically the teacher negative ratings are low for second grade level boys and higher for the upper grade levels. While this pattern was observed for February, it was not especially apparent from the spring assessement.

Differences Among the Three Grade Levels (Girls)

The data for girls revealed significant differences on eight of the 15 selected BCCI scales (Table 4). Five of these scales were in the self-competency and self-report area, one scale was in the peer support area, and two teacher rating scales.

For the girls self-competency was extremely different in the three grade levels. The pattern of differences (high in the lower grade levels and low in the upper grade levels) is important and should lead to some directed focus for the grade level learning teams in the future. On the three career awareness scales (intellectual, social, and overall) the similar pattern was observed: older students appeared to be less interested in these three career related areas. It should be pointed out that probably younger children allow their imagination to guide their career thoughts, but that older children (even fourth grade level girls) become more refined in their considerations. Lastly in the self-reported attitude toward school, we see a pattern that shows differences among the three grade levels in both assessments with the BCCI. Further, this pattern suggests in both assessments that second grade level girls have a more positive attitude toward school did fourth grade level girls. However, in this particular data set from Stuttgart

we should look at the third grade level team's skills in fostering a more positive attitude toward school, overtime. Thus, among the girls five educationally important patterns have developed among their self-competency and self-reported interests and attitudes.

Peer nominations of reticent girls appeared to follow the same pattern as the one we observed for boys: in the February differences among grade levels existed; however, by spring these differences became less meaningful. We should also note that an interaction among grade level and sex of students occurred such that more girls were nominated as reticent in grade levels two and three and that about the same number of girls were so nominated in the fourth grade level over time.

For the girls in both assessments positive teacher ratings were very different by grade level. Typically positive teacher judgments decline over grade level (Barclay, 1974b); however, as with the boys, the girls' pattern of positive teacher ratings appeared to be higher for the upper two grade levels (Table 4). Even though the spring scores are slightly lower than the February positive teacher ratings, the pattern re-emphasizes the value of the teacher in-service training program for the teachers' judgments of girls. In other data sets (Barclay, 1974b) the increase in negative teacher ratings has been reported for the higher grade levels. A similar pattern of increase was found for the three grade levels in the Stuttgart program. We should observe from the spring teacher negative adjective data that the second grade level girls' scores declined and that the third and fourth grade level scores increased only slightly. Once more "The Circle" training program appeared to have an effect in a desirable direction, lowering the frequency of negative teacher ratings.

Analysis of Changes in Scores Over Time

The 15 selected BCCI scores were analyzed using a covariance model such that the February score was the covariate for the spring score. From this analysis we should learn whether the effects of the affective education program were meaningful and significant over time. Happily, on ten of the 15 selected scores we found statistically significant and meaningful patterns!

Of these ten scores five were in the self-competency and self-report areas. Considering the February assessment results for the three grade levels, the analysis of the self-competency scores show that boys developed more so than did the girls (Table 5). We must also note that second grade level boys and girls appeared to maintain a strong self-competency while their third and fourth grade level schoolmates appeared to weaken their self-competency. Why or how this differential gain occurred is beyond the present data. The set of answers might consider pressures from school (i.e., peer and teacher support, a redefinition of self-competency by the older children, or greater individual differences among the older children). Again considering the February results for all 218 children, their career education development scores revealed a series of anticipated patterns. For example, in their interests in realistic-masculine career activties the boys made more gains than did the girls. For another example, and in contrast, the girls made more gains in socially-oriented career education activity interests than did the boys. When we look at boys and girls the data suggest that both become less interested (less idealistic) over time and over grade level. Again over time, the boys and girls' combined career awareness seemed to decline for the higher grade levels. Earlier we have suggested that this decline might be an increase in specificity based upon greater knowledge of the world of work and of career patterns. The boys and girls' attitude toward school

was differentiated among the three grade levels. Third grade level students had a more positive attitude toward school than did either of the other two grade levels in the Stuttgart program over time. Thus again from these self-competency and self-reported data, we can identify some patterns which suggest focus for the continued affective education program.

In the area of peer support or nominations the boys developed some patterns which were considerably different than girls (Table 5). In their change over time the boys became more "outdoors oriented", more enterprising or leaders, and more disruptive than their female classmates. Boys after all must be boys and these youngsters apparently are! We have a serious value question on these data: Are we obtaining what we want or should we consider some program changes which would reduce these apparent differences between the sexes?!

Lastly in the area of teacher judgments about second through fourth grade level children, we found some interesting differences. For example, teacher positive judgments increased over time and over grade level. This pattern was not anticipated and again we suggest that the in-service training was important in this regard. For a second example, teacher negative ratings seemed to favor the boys and increase in number over grade level. This pattern while anticipated (Barclay, 1974b) suggests a focus for in-service training of new and present teachers.

SUMMARY OF REPORT

This report describes a twelve-week pilot phase of an affective education program, sponsored by E.S.E.A. Title III, in the Stuttgart School District No. 22, Arkansas. Two-hundred eighteen boys and girls in the second, third and fourth grade levels in one school participating in this program provided data for this report. The results were presented in five tables.

A number of summary comments can be made:

(1) Among the ten classroom units several significant and meaningful differences were observed for boys and girls (Tables 1 and 2). These differences were suggestive of patterns which could influence programs in the future. These differences raise a host of challenges to an affective education program staff:

(a) Why does self-competency appear to stand out strongly or weakly in selected classrooms? Is the difference primarily maturation, or are there "real" differences among the classrooms in terms of peer and teacher support?

(b) Why are some classrooms appear to be more or less facilitative of selected career awareness patterns? What goes on to promote these differences? Are the differences desirable?

(c) How are some selected classroom teachers appear to be different in their style of classroom management? What observable differences exist between a highly responsive teacher and a teacher who uses only a few teacher rating adjectives?

(d) What exciting activities make selected classrooms more appealing for boys? In the long run should the classrooms be made more exciting for boys?

(2) Among the three grade levels other significant and important differences were found (Table 3 and 4). More differences were found for girls than for boys. These differences suggest a combination of maturation, expanding career awareness, and a sharpening of teacher judgments that effect boys and girls. The affective education program staff may consider these assessed differences for the continued program in Stuttgart. For example:

(a) Why does self-competency for boys and for girls appear to decline over grade levels? Can some specific exercises be employed to prevent this decline (which is more dramatic for girls than for boys)?

(b) Can we develop some strategies prior to second grade level to reduce the classroom impact upon selected shy boys and girls? Why do more girls get nominated for reticence in the higher grade levels than boys? Should special strategies be employed for first grade level boys and fourth grade level girls?

(c) What classroom career education activities can be used to stimulate boys in the same way girls apparently were stimulated? Are we observing the effects of female teachers as models for the girls to emulate? What dramatic events contribute to the sharpening of negative teacher ratings for girls?

(d) How can the positive attitude toward school developed in the lower grade levels be maintained in the upper grade levels?

(3) When the boys' and girls' February assessment data were compared with their spring 1975 scores on the BCCI a number of crucial patterns were observed (Table 5). Most of these differences were between boys and girls. In most of these cases the primary question that should be answered by the affective education program staff and participants is: Do we want these differences between sexes to be maintained, particularly in view of changing societal patterns? The answer to this important question should be developed only after the most painstaking deliberation. The other differences among these boys and girls raised several issues, such as:

(a) How can we slow down the decline in self-competency between grade levels and over time within grade levels?

(b) How can we expand career awareness, which in the long run is so important for social-affective development, in the upper grade levels?

(c) How can we modify the classroom environment so that boys and girls between grade levels and over time within grade levels do not earn (obtain?) more negative teacher ratings?

(d) What can be done to maintain a positive attitude toward school over time? This challenge is probably the most perplexing since an answer involves so many contributors to the classroom and the individual student.

A paper of this type raises more issues than it actually resolves. The challenge from this paper is to develop methods of remediation for other affective education programs. No answer will come easily. The potential reward for the children is great and worth seeking!

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Table 1

Summary of Analysis of Variance for Selected BCCI Scale Scores,

Means and F Ratio's for Males (February & May, 1976)

Classroom ID	N	STOT		GAI		GRM		GSC		GE	
		February	May	February	May	February	May	February	May	February	May
12-21	10	18.6000	18.2000	3.8000	5.2000	6.2000	6.6000	5.4000	6.4000	8.1000	8.1000
12-22	11	12.0000	14.2727	3.6364	3.5455	4.6364	4.0909	5.5455	5.6364	6.1818	5.9091
12-23	7	17.1429	19.1429	5.4286	4.7143	6.7143	7.4286	6.4286	6.1000	11.4286	10.8571
12-24	10	14.7000	16.6000	3.1000	3.1000	5.0000	5.2000	5.5000	5.7333	7.2000	5.8000
12-25	15	16.3333	16.9333	2.8000	3.6000	4.4667	5.7333	5.0000	5.4000	6.9333	5.2667
12-26	10	16.0000	17.4000	3.7000	3.8000	6.4000	5.5000	6.2000	5.0000	6.0000	5.8000
12-27	13	15.0000	16.7692	1.1538	1.7692	4.9231	4.1538	4.1538	7.0909	5.6154	5.5385
12-50	11	15.4545	13.9091	3.0909	4.0909	5.0909	5.4545	5.9091	5.3846	8.9091	8.8182
12-51	13	14.6923	14.9231	2.4615	2.8462	6.9231	6.5385	5.4615	5.6000	8.7692	7.8462
12-52	10	15.0000	14.6000	2.9000	3.5000	7.0000	6.8000	5.7000	5.8727	6.5000	5.6000
$\bar{X}$		15.3182	16.1636	3.0545	3.5182	5.6455	5.6636	5.4455	5.8727	7.4091	6.7636
S.D.		4.4761	4.2932	4.1172	4.2182	5.8476	5.7888	5.6318	5.8075	7.1219	6.1821
F Ratio		1.713	1.756	.674	.542	.315	.356	.131	.146	.542	.832
P Level		.095	.086	.732	.841	.968	.953	.998	.998	.842	.590

Table 1 con't

Variable Name									
GR		GD		GTOT		REAL		INT	
February	May	February	May	February	May	February	May	February	May
3.6000	2.7000	4.4000	4.4000	23.5000	26.3000	7.2000	5.9000	5.9000	5.6000
2.7273	2.5455	2.8182	2.1818	20.0000	19.1818	5.1818	5.3636	4.1818	3.7273
4.8571	4.2857	6.5714	5.1429	30.0000	30.1429	8.2857	8.8571	7.7143	7.7143
3.8000	3.2000	4.5000	4.5000	20.8000	20.2000	7.0000	7.4000	4.1000	6.5000
2.3333	2.1333	3.8000	3.6000	19.2000	20.3333	7.2000	6.8667	5.0667	5.9333
3.3000	3.3000	4.2000	2.8000	22.3000	20.5000	5.7000	7.0000	5.2000	6.7000
2.7692	2.0769	4.5385	4.3846	15.8462	16.4615	5.5385	7.4615	4.3077	5.0769
2.4545	2.1818	3.9091	4.0000	23.000	25.4545	6.7273	6.7273	4.1818	5.4545
1.3846	2.0769	4.0000	3.7692	23.6154	22.6154	6.3846	6.8462	5.0769	5.5385
2.7000	2.3000	5.6000	3.9000	22.1000	21.5000	4.7000	4.3000	2.6000	4.3000
2.8545	2.5727	4.3182	3.8182	21.5545	21.8182	6.3455	6.6364	4.7455	5.5727
2.7589	2.0429	6.7863	5.6393	18.1919	18.2290	3.0753	3.2951	2.7275	2.8654
1.169	1.120	.192	.214	.370	.436	1.262	1. 69	2.314	1.596
.323	.356	.994	.991	.946	.913	.267	.212	.021	.126

Table 1 con't

Variable Name									
SOC		VTOT		TR+		TR-		CCI	
February	May	February	May	February	May	February	May	February	May
4.7000	6.8000	37.9000	37.8000	16.4000	13.4000	6.3000	6.4000	11.6000	11.3000
6.4545	7.2727	39.5454	38.6364	12.1818	14.9091	13.8182	12.0909	7.7273	7.5455
7.8571	7.1429	45.7143	47.0000	2.0000	1.5714	2.0000	2.1429	9.4286	10.7143
4.2000	6.1000	33.4000	41.0000	9.2000	6.4000	3.2000	1.8000	8.6000	9.3000
4.7333	5.8667	36.4667	39.3333	18.4000	14.6667	6.0667	4.6000	9.7333	10.4667
6.7000	7.6000	38.9000	43.1000	17.6000	13.2000	3.1000	3.0000	7.4000	9.9000
4.9231	6.2308	34.9231	40.8461	21.0000	15.3846	9.0000	8.5385	5.6154	9.9231
5.6364	5.0909	37.2727	38.0000	8.0909	8.8182	9.9091	6.5455	8.3636	9.2727
5.3846	6.0000	36.1538	39.0000	15.3846	12.7692	8.3077	11.1538	9.2308	8.3077
3.6000	4.0000	27.7000	31.7000	21.1000	21.8000	11.9000	8.3000	8.0000	10.1000
5.3182	6.1636	36.5000	39.4182	14.8091	12.7818	7.6000	6.7273	8.5273	9.6364
3.2395	3.1984	11.1567	10.7716	9.9185	9.1785	7.5725	7.1714	3.0731	2.7150
1.457	1.169	1.575	1.211	4.791	4.088	3.115	3.145	3.783	2.022
.174	.323	.132	.297	.000	.000	.002	.002	.000	.044

Table 2

Summary of Analysis of Variance for Selected BCCI Scale Scores,

Means and F Ratio's for Females (February & May, 1975)

Classroom		Variable Name									
		STOT		GAI		GRM		GSC		GE	
ID	N	February	May	February	May	February	May	February	May	February	May
12-21	11	17.0909	16.2727	4.3636	2.7273	2.2727	1.8182	6.3636	5.0000	4.0909	4.1818
12-22	5	14.0000	16.8000	4.4000	4.8000	1.0000	5.4000	6.8000	8.0000	4.0000	4.4000
12-23	12	17.2500	18.6667	3.1667	3.6667	1.5833	1.3333	6.1667	5.0833	2.9167	3.4167
12-24	8	17.1250	15.1250	5.0000	5.5000	2.5000	2.3750	6.8750	5.7500	4.0000	6.2500
12-25	12	15.5833	15.7500	5.2500	4.7500	3.1667	2.3333	6.7500	6.0833	4.6667	5.8333
12-26	12	15.0833	16.5000	3.1667	2.5000	1.4167	1.6667	4.5000	4.5833	4.9167	3.9167
12-27	9	14.3333	13.7778	8.8889	8.3333	2.8889	3.5556	9.8889	8.3333	7.1111	7.8889
12-50	11	15.1818	12.4545	4.2727	4.0000	1.4545	1.2727	4.5455	4.9091	2.8182	3.9091
12-51	13	11.8462	13.3077	5.6923	5.9231	.9231	1.9231	6.2308	6.9231	3.3077	4.6923
12-52	15	13.8000	11.9333	5.1333	5.1333	2.1333	2.2667	6.9333	6.8000	4.2667	4.9333
X		15.0648	14.8889	4.8796	4.6481	1.9444	2.1759	6.4074	6.0278	4.1574	4.8611
S.D.		4.2476	4.2169	7.7348	6.6450	2.9979	2.9157	7.1656	5.9239	4.4704	4.5682
F Ratio		2.074	3.786	.414	.647	.670	1.235	.412	.448	.744	.849
P Level		.039	.000	.925	.755	.736	.282	.926	.905	.669	.574

Table 7 con't

Variable Name									
GR		GD		GTOT		REAL		INT	
February	May	February	May	February	May	February	May	February	May
2.2727	3.0000	1.6364	2.0909	17.0909	13.7273	3.6364	3.0000	5.7273	4.6364
1.8000	2.2000	2.4000	2.0000	16.2000	22.6000	4.4000	4.8000	5.6000	5.4000
1.6667	1.9167	1.0833	1.6667	13.8333	13.5000	3.4167	5.3333	3.7500	6.2500
1.6250	1.8750	.6250	1.0000	18.3750	19.8750	2.1250	2.8750	3.5000	6.0000
3.4167	3.4167	1.7500	1.7500	19.8333	19.0000	3.9167	4.5833	3.8333	6.4167
2.3333	1.9167	1.5833	2.6667	14.0000	12.6667	2.2500	3.2500	2.3333	4.5000
2.1111	4.4444	1.1111	2.7778	28.7780	28.1111	1.6667	3.1111	3.0000	3.8889
2.5455	3.5455	1.2727	1.0909	13.0909	14.0909	2.6364	3.2727	2.3077	3.3636
4.4615	4.3846	2.1538	3.0000	16.1538	19.4615	2.0769	2.4615	3.9333	3.8462
3.40[illegible]	3.2000	1.4000	1.6000	18.4667	19.1333	1.9333	3.0000	3.8796	4.3333
2.7037	3.0556	1.4907	1.9815	17.3889	17.7130	2.7222	3.5093	3.8796	4.8056
2.6695	3.1706	1.5796	2.3679	19.9733	17.7074	2.6150	2.7935	2.5640	2.5558
1.402	1.0004	.926	.892	.475	.711	1.273	1.302	2.887	2.179
.197	.442	.507	.537	.888	.698	.261	.245	.005	.030

Table 2 con't

Variable Name									
SOC		VTOT		TR+		TR-		CCI	
February	May	February	May	February	May	February	May	February	May
6.7273	7.6364	38.0909	38.9091	23.3636	19.2727	3.7273	2.0000	10.9091	10.1818
8.6000	9.4000	41.6000	44.2000	13.4000	16.2000	10.4000	4.4000	8.8000	11.2000
7.8333	8.6667	36.0833	43.6667	3.5000	2.0000	.6667	1.6667	10.5000	9.7500
8.1250	9.1250	35.8750	41.6250	12.7500	10.2500	.7500	1.5000	10.2500	10.7500
8.3333	8.6667	40.1667	43.3333	19.5833	18.0000	6.3333	5.9167	10.8333	11.2500
8.0000	9.1667	35.5833	40.0000	16.8333	14.3333	2.5833	3.5833	9.3333	11.2500
7.4444	8 6667	33.4444	39.4444	23.2222	19.6667	5.4444	5.3333	7.6667	9.7778
6.3636	7.5455	35.9091	36.8182	10.2727	10.6364	7.4545	8.2727	8.5455	8.3636
6.9231	7.0000	32.0769	35.8461	14.0769	11.8462	8.3846	10.7692	8.8462	9.0000
7.4000	7.6667	33.8667	35.7333	22.4667	21.1333	8.5333	6.2000	9.0667	8.8000
7.5000	8.2315	35.8981	39.5185	16.1759	14.3704	5.3889	5.1481	9.5185	9.9074
2.9307	2.5636	9.6062	9.6340	9.7270	9.6573	6.0725	6.3699	2.8234	2.7566
.588	1.081	.884	1.224	7.893	6.108	3.760	3.175	1.630	1.774
.805	.383	.543	.289	.000	.000	.000	.002	.117	.082

Table 3

Summary of Analysis of Variance for Selected BCCI

Scores by Grade Level for Males

Variable		Grade Level						
Name	Time	2	3	4	$\bar{X}$	S.D.	F	P
N		38	38	34				
STOT	February	15.3947	15.7895	14.7059	15.3182	4.4761	.530	.596
	May	16.8158	17.0000	14.5000	16.1636	4.2932	3.910	.023
SOC	February	5.6579	5.3158	4.9412	5.3182	3.2395	.435	.654
	May	6.8158	6.4474	5.1176	6.1636	3.1984	2.851	.061
GR	February	3.6316	2.7368	2.1176	2.8545	2.7589	2.848	.061
	May	3.0789	2.4211	2.1765	2.5727	2.0429	1.944	.146
TR+	February	10.6316	19.0789	14.7059	14.8091	9.9185	7.747	.001
	May	9.8158	14.5263	14.1471	12.7818	9.1785	3.168	.045
CCI	February	9.2895	7.7105	8.5882	8.5273	3.0731	2.591	.078
	May	9.5789	10.1316	9.1471	9.6364	2.7150	1.197	.306

Table 4

Summary of Analysis of Variance for Selected BCCI Scores by Grade Level for Females

Variable Name	Time	Grade Level 2	3	4	$\bar{X}$	S.D.	F	P
N		36	33	39				
STOT	February	16.7222	15.0606	13.5385	15.0648	4.2476	5.722	.005
	May	16.8889	15.4848	12.5385	14.8889	4.2169	12.724	.000
GR	February	1.8611	2.6667	3.5128	2.7037	2.6695	3.774	.026
	May	2.2778	3.1515	3.6923	3.0556	3.1706	1.917	.150
INT	February	4.5556	4.0303	3.1282	3.8796	2.5640	3.100	.048
	May	5.5833	5.0303	3.8974	4.8056	2.5558	4.538	.013
SOC	February	7.6667	7.9697	6.9487	7.5000	2.9307	1.176	.313
	May	8.5556	8.8485	7.4103	8.2315	2.5636	3.389	.037
VTOT	February	37.4167	36.6667	33.8461	35.8981	9.6062	1.457	.236
	May	41.8333	41.0606	36.0769	39.5185	9.6340	4.186	.018
TR+	February	13.0000	19.5757	16.2308	16.1759	9.7270	4.168	.018
	May	11.0833	17.1212	15.0769	14.3704	9.6573	3.707	.027
TR-	February	2.9722	4.7273	8.1795	5.3889	6.0725	8.118	.001
	May	1.9444	4.9091	8.3077	5.1481	6.3699	11.153	.000
CCI	February	10.3333	9.4242	8.8462	9.5185	2.8234	2.707	.070
	May	10.3056	10.8485	8.7436	9.9074	2.7566	6.352	.003

Table 5

Analysis of Covariance Results by Sex and Grade Level

for Selected May 1975 BCCI Variables

Variable	Sex		Grade Level				
Name	Male	Female	2	3	4	F	P
STOT	16.08	14.97				4.207	.039
			16.81	16.25	13.53	13.417	.001
GRM	5.75	2.18				29.340	.001
GE	6.79	4.84				6.458	.011
GD	3.94	1.86				11.339	.001
REAL	6.53	3.62				35.025	.001
SOC	6.14	8.26				26.311	.001
			7.68	7.63	6.27	5.659	.004
VTOT			41.02	40.94	36.37	5.066	.007
TR+			11.27	14.92	14.59	3.408	.034
TR-	6.75	5.12				3.292	.068
			4.13	5.24	8.46	8.119	.001
CCI			9.85	10.53	8.95	6.335	.002